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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,493	01/11/2001	M. Amin Arnaout	00786-804001 / MGH 1721.1	9328
26161	7590	06/23/2004	EXAMINER HADDAD, MAHER M	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			ART UNIT 1644	PAPER NUMBER

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,493

Applicant(s)

ARNAOUT ET AL.

Examiner

Maheer M. Haddad

Art Unit

1644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 13-45 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

1. Claims 13-45 are pending.

1. Restriction to one of the following inventions is required under 35 U.S.C. § 121:

- I. Claim 13, drawn to an isolated nucleic acid molecule encoding a modified CD11b α polypeptide, classified in Class 536, subclass 23.5.
- II. Claim 15, drawn to an isolated nucleic acid molecule encoding a modified CD11a α polypeptide, classified in Class 536, subclass 23.5.
- III. Claim 14, drawn to a CD11b α polypeptide; classified in Class 530, subclasses 395.
- IV. Claim 16, drawn to a CD11a α polypeptide; classified in Class 530, subclasses 395.
- V. Claims 17, 21, 25, drawn to a method for determining whether a test compound is a candidate compound for binding to CD11b, comprising contacting a test compound with a polypeptide of CD11b α subunit; classified in Class 435, subclass 7.1.
- VI. Claims 18-19, 22-23, 26-27, drawn to an antibody that selectively binds to a CD11b α subunit, a method for generating an antibody that selectively binds to a polypeptide comprising the open form of CD11b; classified in Class 530, subclass 387.3, and 391.1; Class 424, subclass 133.1; Class 435, subclass 810.
- VII. III. Claims 20, 24, 28, drawn to a method for determining whether a test compound is a candidate compound or treating an inflammatory disorder comprising contacting a test compound with a polypeptide of CD11b α subunit, classified in Class 435, subclass 7.1.
- VIII. Claim 29, drawn to an isolated nucleic acid molecule encoding a CD11c α polypeptide, classified in Class 536, subclass 23.5.
- IX. Claim 30, drawn to a CD11c α polypeptide; classified in Class 530, subclasses 395.
- X. Claims 31, drawn to an isolated nucleic acid molecule encoding a CD11d α polypeptide, classified in Class 536, subclass 23.5.
- XI. Claim 32, drawn to a CD11d α polypeptide; classified in Class 530, subclasses 395.
- XII. Claim 33, drawn to an isolated nucleic acid molecule encoding a CD49a α polypeptide, classified in Class 536, subclass 23.5.

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- XIII. Claim 34, drawn to a CD49a α polypeptide; classified in Class 530, subclasses 395.
- XIV. Claim 35, drawn to an isolated nucleic acid molecule encoding a CD49b α polypeptide, classified in Class 536, subclass 23.5.
- XV. Claim 36, drawn to a CD49b α polypeptide; classified in Class 530, subclasses 395.
- XVI. Claim 37, drawn to an isolated nucleic acid molecule encoding an Alpha 10 α polypeptide, classified in Class 536, subclass 23.5.
- XVII. Claim 38, drawn to an Alpha 10 α polypeptide; classified in Class 530, subclasses 395.
- XVIII. Claim 39, drawn to an isolated nucleic acid molecule encoding an Alpha 11 α polypeptide, classified in Class 536, subclass 23.5.
- XIX. Claim 40, drawn to an Alpha 11 α polypeptide; classified in Class 530, subclasses 395.
- XX. Claim 41, drawn to an isolated nucleic acid molecule encoding an Alpha E α polypeptide, classified in Class 536, subclass 23.5.
- XXI. Claim 42, drawn to an Alpha E α polypeptide; classified in Class 530, subclasses 395, 837, and 866.
- XXII. Claims 43-45, drawn to a method for treating an inflammatory disorder with an antibody that selectively binds to the open form of a CD11a α subunit, classified in Class 424, subclasses 144.1.
- XXIII. Claims 43-45, drawn to a method for treating an inflammatory disorder with an antibody that selectively binds to the open form of a CD11b α subunit, classified in Class 424, subclasses 144.1.

3. Groups I-IV, VI and VIII-XXI are different products. Nucleic acids, polypeptides, and antibodies to the polypeptides differ with respect to their structures and physicochemical properties; therefore each product is patentably distinct.

4. Groups V, VII and XXII-XXIII are different methods. A method for treating and a method of determining differ with respect to ingredients, method steps, and endpoints; therefore, each method is patentably distinct.

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5. Groups (VI and XXII-XXIII), I/V and III/VII are related as product and process of using. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the antibody of Group VI can be used for affinity purification, in addition to the methods of treating recited. Further, the polypeptides of Groups I and III can be used to make an antibody in addition to the method of determining recited.

6. These inventions are distinct for the reasons given above. In addition, they have acquired a separate status in the art as shown by different classification and/or recognized divergent subject matter. Further, even though in some cases the classification is shared, a different field of search would be required based upon the structurally distinct products recited and the various methods of use comprising distinct method steps. Therefore restriction for examination purposes as indicated is proper. Further, a prior art search also requires a literature search. It is an undue burden for the examiner to search more than one invention.

Species Election

7. Irrespective of whichever group applicant may elect, applicant is further required under 35 US 121 (1) to elect a single disclosed species to which claims would be restricted if no generic claim is finally held to be allowable and (2) to list all claims readable thereon including those subsequently added.

- A. If any one of Groups 1-XXIII is elected, applicant is required to elect a single combination of modifications in the α subunit (i.e., elect position(s) where the modification occur and the length of the α subunit). These are distinct species because their structures and physicochemical properties are different which, in turn, address different therapeutic endpoints.
- B. If Group XXII or XXIII is elected, applicant is required to elect a single specific disorder such as (ischemia-reperfusion injury or retinosis), These species are distinct because the pathological conditions differ in etiologies and therapeutic endpoints; thus each condition represents patentably distinct subject matter.

Applicant is required under 35 U.S.C. § 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable.

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8. Applicant is advised that a response to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. M.P.E.P. § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. § 103 of the other invention.

9. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

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12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maher Haddad whose telephone number is (571) 272-0845. The examiner can normally be reached Monday through Friday from 7:30 am to 4:00 pm. A message may be left on the examiner's voice mail service. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan can be reached on (571) 272-0841. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 18, 2004


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